

CLAIMS

1. Hydrofluorination catalyst based on chromium oxide which is poor in ammonium salts.
- 5 2. Catalyst according to Claim 1, comprising less than 1% by weight of ammonium salts, expressed in the form of NH_4^+ , with respect to the content of chromium in the catalyst, expressed in the form of Cr_2O_3 .
3. Catalyst according to Claim 2, in which the
10 content of ammonium salts is less than or equal to 0.2% by weight of ammonium salts.
4. Process for the hydrofluorination of a halogenated hydrocarbon by reaction with hydrogen fluoride in the presence of a catalyst according to
15 either one of Claims 2 and 3.
5. Process according to Claim 4, in which the halogenated hydrocarbon is an aliphatic alkane corresponding to the general formula $\text{C}_w\text{H}_x\text{X}_y\text{F}_z$ (I), in which w is an integer between 1 and 6, x is an integer
20 between 0 and $(2w + 1)$, y is an integer between 1 and $(2w + 1)$, z is an integer between 0 and $(2w + 1)$, the sum $(x + y + z)$ has the value $(2w + 2)$ and X represents chlorine or bromine.
6. Process according to Claim 4, in which the
25 halogenated hydrocarbon is an aliphatic alkene corresponding to the general formula $\text{C}_w\text{H}_x\text{X}_y\text{F}_z$ (I), in which w is an integer between 1 and 6, x is an integer between 0 and $(2w - 1)$, y is an integer between 1 and $(2w - 1)$, z is an integer between 0 and $(2w - 1)$, the
30 sum $(x + y + z)$ has the value $2w$ and X represents chlorine or bromine.
7. Process according to any one of Claims 4 to 6, in which the reaction of the halogenated hydrocarbon with the hydrogen fluoride takes place in the gas
35 phase.
8. Process according to any one of Claims 4 to 7 for the synthesis of pentafluoroethane by reaction between hydrogen fluoride and a compound chosen from perchloroethylene, fluorotetrachlorethane, difluoro-

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trichloroethane, trifluorodichloroethane and chloro-tetrafluoroethane.

9. Process according to any one of Claims 4 to 7 for the synthesis of difluoromethane by reaction
5 between hydrogen fluoride and dichloromethane.

10. Process according to any one of Claims 4 to 7 for the synthesis of 1,1,1,2-tetrafluoroethane by reaction between hydrogen fluoride and a compound chosen from trichloroethylene and 2-chloro-
10 1,1,1-trifluoroethane.

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